

REMARKS

Claims 1 - 27 are currently pending in the application. Claims 1, 2, 5, 7, 8, 11, 15, 16, 19-21, and 25-27 have been rejected under 35 U.S.C. §102(b). Claims 3, 4, 6, 9, 10, 12, 13, 14, 17, 18, and 22-24 have been rejected under 35 U.S.C. §103(a). Claims 1, 2, 6, 7, 13, 15, 19, 24 and 25 are amended. No new matter is presented. The above amendments and the following remarks are considered by Applicants to overcome each rejection raised by the Examiner and to place the application in condition for allowance. An early Notice of Allowance is therefore requested.

Applicants acknowledge the Examiner for the interview conducted on June 22, 2006. In the interview, it was agreed that the cited art fails to teach or suggest an apparatus wherein the ejection pulse and only one additional pulse signal generates a stable ejection of minute droplets. In view of the interview, Applicants have amended the independent claims to recite this feature. Therefore, Applicants request the favorable consideration of the pending claims.

I. Objection of claim 19

Claim 19 is objected to for containing an informality. Claim 2 is amended to more clearly recite the features of the claimed invention. As a result, Applicants submit that claim 19 now overcomes the cited objection. Therefore, Applicants request the withdrawal of the objection to claim 19.

II. Rejection of pending claims 1, 2, 5, 7, 8, 11, 15, 16, 19-21, and 25-27 under U.S.C. 102(b) as being anticipated by Takahashi (U.S. Patent No. 6,099,103).

Takahashi discloses an ink-jet apparatus and a driving method thereof which prevents variations in an ink jet velocity caused by variations in ambient temperature. Takahashi discloses a first, second and third pulse signals.

The Examiner takes the position that Takahashi teaches or suggests all the features recited in claims 1, 2, 5, 7, 8, 11, 15, and 16. In view of the amendments to claims 1, 5, 7, 11, and 15, Applicants submit that Takahashi fails to teach or suggest all the features recited in the pending claims.

It is respectfully submitted that Takahashi fails to teach or suggest that the ejection pulse and the one additional pulse signal generates a stable ejection of minute droplets

In contrast to the claimed invention Takahashi does not provide ejection droplets which are stable with only two pulses. As disclosed in Column 7, Lines 36-37, Takahashi discloses that the additional pulse signal B is not sufficient to eject an ink droplet. In addition, Takahashi discloses that the driving waveform may result in the ink ejection becoming unstable unless a jet stabilizing pulse is utilized. Thus, Takahashi fails to teach or suggest that the ejection pulse and only one additional pulse signal generates a stable ejection of minute droplets. It should be noted that in the Office Action, the Examiner indicated that the feature of the ink being stably ejected is not recited in the claims. Therefore, in view of the above amendments, Applicants request that the rejection of claims 1, 2, 5, 7, 8, 11, 15, 16, 19-21 and 23-27 be withdrawn.

III. Rejection of pending claims 3, 9, and 17 under U.S.C. 103(a) as being unpatentable over Takahashi (U.S. Patent No. 6,099,103).

Claims 3, 9, and 17 are dependent upon claims 1, 7, and 15. Takahashi fails to teach or suggest an apparatus having an ejection pulse and only one additional pulse signal generating a stable ejection of minute droplets. Therefore, it is submitted that claims 3, 9, and 17 recite patentable subject matter for at least the reasons mentioned above. Applicants request the withdrawal of the rejection of claims 3, 9, and 17 under 35 U.S.C. 103(a).

IV. Rejection of pending claims 4, 10, and 18 under U.S.C. 103(a) as being unpatentable over Takahashi (U.S. Patent No. 6,099,103) in view of Okuda et al. (U.S. Patent No. 6,705,696).

Claims 4, 10, and 18 are dependent upon claims 1, 7, and 15. It is respectfully submitted that the cited references fail to teach or suggest an apparatus having an ejection pulse and only one additional pulse signal generating a stable ejection of minute droplets. Therefore, it is submitted that claims 4, 10, and 18 recite patentable subject matter for at least the reasons mentioned above. Applicants request the withdrawal of the rejection of claims 4, 10, and 18 under 35 U.S.C. 103(a).

V. Rejection of pending claims 6 and 12 under U.S.C. 103(a) as being unpatentable over Takahashi (U.S. Patent No. 6,099,103) in view of Takahashi (U.S. PUB. 2001/0043241).

Claims 6 and 12 are dependent upon claims 1 and 7. Neither of the Takahashi references teach or suggest an apparatus wherein the ejection pulse and only one additional pulse signal generates a stable ejection of minute droplets. Therefore, it is submitted that claims 6 and 12 recite patentable subject matter for at least the reasons mentioned above. Applicants request the withdrawal of the rejection of claims 6 and 12 under 35 U.S.C. 103(a).

VI. Rejection of pending claims 13 and 14 under U.S.C. 103(a) as being unpatentable over Takahashi (U.S. Patent No. 6,099,103) in view of Junhua (U.S. Publication 2003/0085962).

The Examiner takes the position that the combination of the cited references teaches or suggest the features recited in claims 13 and 14. Applicants respectfully disagree.

It is respectfully submitted that neither Takahashi nor Junhua teach or suggest an apparatus wherein the ejection pulse and only one additional pulse signal generates a stable ejection of minute droplets. Junhua does not cure the deficiencies of Takahashi. Therefore, it is respectfully submitted that claim 13 and 14 recite patentable subject matter for at least the reasons mentioned above. Therefore, Applicants request the withdrawal of the rejection of claims 13 and 14 under 35 U.S.C. 103(a).

VII. Rejection of pending claims 22-24 under U.S.C. 103(a) as being unpatentable over Takahashi (U.S. Patent No. 6,099,103) in view of Kurashima et al. (U.S. Patent No. 6,457,818).

The Examiner takes the position that the combination of the cited references teaches or suggest the features recited in claims 22-24. Applicants respectfully disagree.

Claims 22-24 are dependent on independent claims 20. Therefore, it is respectfully submitted that neither Takahashi nor Kurashima teach or suggest an apparatus wherein the ejection pulse and only one additional pulse signal generates a stable ejection of minute droplets. Therefore, it is respectfully submitted that claims 22-24 recite patentable subject matter for at least the reasons mentioned above. Therefore, Applicants request the withdrawal of the rejection of claims 22-24 under 35 U.S.C. 103(a).

VIII. Conclusion

In view of the above amendments and remarks, Applicant submits claims 1-27 recite subject matter that is neither taught nor suggested by the applied references. The specification is amended. Thus, for the reasons presented above, claims 1-27 are believed by Applicant to define patentable subject matter and should be passed to issue at the earliest possible time. A Notice of Allowance is requested.

Respectfully submitted,

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